

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. Claims 2-4, 8, 10-13, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flexman et al. (US 2004/0121175) in view of ARKEMA brochure (PEBAX® Application Areas. 6/2000).

2. Regarding claims 2-3, 10-12, and 21:

3. Flexman discloses an article having substrate comprising a blend of POM and a thermoplastic polymer, and another layer adhered to the substrate [0014]. The thermoplastic polymer corresponds to the presently claimed optional additives, e.g., fillers and reinforcing materials. The overmolded layer on the substrate can be a thermoplastic elastomer [0091-92].

4. Flexman is silent with regard to a polyetheramide elastomer.

5. ARKEMA sold polyetheramide elastomers under the name PEBAX® as evidenced by the tradematerial brochure provided. The brochure notes PEBAX® 2533 provides suitable elastomers for mechanical parts, sport articles, and medical devices (p10). The number “25” in “2533” refers to the shore D hardness of the elastomer and “33” refers to the series (p4). This elastomer satisfies the presently disclosed chemical identity requirements because it is the same material used in the present invention.

6. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use commercially available polyetheramide elastomer, including PEBAX® 2533, in the composite taught by Flexman to arrive at a composite having desirable qualities for a given end use such as mechanical parts, sport articles, and medical devices.

7. The present claims are written in a product-by-process format. The examiner takes the position that the final composite structure of the tubing taught by Flexman combined with ARKEMA would be indistinguishable from the final product of the presently claimed invention, as both describe a layer of POM adhesively bonded to a polyamide elastomer.

8. With regard to the presently claimed tensile bond strength limits, the examiner takes the position that the composite tubing of Flexman combined with ARKEMA satisfies Applicant's requirements given that the composite has the same structure as claimed.

9. Regarding claim 4:

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10. The TPU can have conventional additives, e.g., stabilizers [0089].
11. Regarding claim 8:
12. As noted ARKEMA discloses Pebax® 2533 has shore D hardness 25.
13. Regarding claim 13:
14. The elastomer layer is “co-continuous,” i.e., completely covers the substrate [0014; 0020].
15. Regarding claim 19:
16. Flexman notes sealing clips can be made [0015]. Furthermore, the examiner considers the POM coated with the thermoplastic polyetheramide elastomer to be a non-slip or easy-grip component intrinsically.

Response to Arguments

17. Applicant's arguments filed 12/21/2011 have been fully considered but they are not persuasive.
18. Although the examiner previously stated the submitted amendments would likely overcome the Flexman reference, upon further examination the examiner submits the amendments do not overcome the reference.
19. Specifically, although the present claims now recite the polyacetal component “consists of” a polyacetal whereas Flexman requires a polyacetal and a thermoplastic polymer, the examiner submits the thermoplastic polymer is encompassed by the broad optional additives (e.g., fillers) present in the independent claim.
20. Included herewith is an Interview Summary detailing an interview conducted by the examiner in concert with Christina Mangelsen in an attempt to advance prosecution. As noted in the Summary, an agreement could not be reached over the phone.

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Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN FREEMAN whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 9:00-6:00PM PST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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